Responses to Comments

1-1
Comment noted.

1-2
Thank you.

2-1
Comment noted.

3-1
Comment noted.

4-1
Comment noted. As stated more clearly in Chapter 2 of the FEIS and Appendix B, the Segment A Reroute is not preferred.

5-1
Although your property is located in the general vicinity of the proposed alternatives, your property is not crossed by any of the alternatives. For the Preferred Alternative, your property is located approximately 1 1/2 to 2 miles west of the proposed Wautoma Substation.

6-1
Segment A has not changed because of the cultural resource area shown on the map you refer to. The Segment A Reroute was introduced because of anticipated difficulties in acquiring the right-of-way (ROW) for the new line and renewing the ROW for the existing Schultz-Vantage line across a tribal allotment. Please see Appendix B for more detail on the Segment A Reroute.

6-2
Thank you.

7-1
The existing line passing through Sec. 27, 28, Range 19, Township 19 is the BPA Vantage - Schultz 500-kilovolt (kV) line. The new line from Schultz Substation to Wautoma Substation would be a 500-kV line designed to minimize corona on the conductors. Corona is the source of audible noise, visible light, and a small power loss during foul weather. The new line would use a bundle of three conductors suspended from each insulator as opposed to the single large (2.5") conductor on each insulator for the existing line.

Thus, the new line would be much quieter (14 decibels (dBA) less at the edge of the right-of-way) during foul weather than the existing line. This reduction would be perceived as more than a halving of the noise level. Because of reduced corona levels the conductors of the new line would be less visible during foul weather. Corona loss is localized very near the conductors and does not affect persons or animals on the ground except through perception of either audible noise or visible light.

Nuisance shocks can occur when touching fences under or near 500-kV transmission lines if the person or the fence is not completely grounded. During construction BPA grounds fences and other metal objects on the ROW to eliminate them as sources of nuisance shocks. However, someone wearing insulating shoes can still perceive a nuisance shock when touching a grounded object such as a fence. Similarly, a person could perceive a nuisance shock when touching a vehicle on insulating tires.

Safety of persons and animals is not compromised as long as a safe distance is maintained from the conductors. Thus, irrigation pipes and other long objects should be carried horizontally under the 500-kV or any electric lines. Such long objects should not be tipped up under the lines. Similarly, to prevent a direct path for electricity to flow to ground, direct streams of water should not be sprayed on the conductors.

BPA provides guidance on how to live and work safely near high-voltage transmission lines in their publication "Living and Working Around High-Voltage Power Lines" (DOE/BP-799), 1995, Portland, OR. Please contact BPA to receive a copy, or if you have questions about safety near transmission lines.

7-2
The Preferred Alternative includes locating the new line north of the existing line. As demonstrated in meetings and comments, most people preferred this location. The north side also minimizes the number of 500-kV line crossovers.

Due to existing industry criteria (North American Electric Reliability Council) concerning transmission system reliability, BPA cannot double-circuit two 500-kV transmission lines on the same structure. Structure failure or lightning could remove both circuits from service at the same time. Because 500-kV lines are the backbone of the region's transmission system, any unplanned removal of 500-kV lines from service presents a very big problem for the Pacific Northwest and beyond. Also, the cost to double-circuit is almost double that of a single-circuit line.

7-3
BPA would need to acquire easements to build, operate and maintain the proposed transmission line facilities. Landowners would be contacted and offered fair market value for the easements, which would be established through the appraisal process. The appraisal process takes all factors affecting value into consideration, including the impact of transmission lines on property value. It may also reference studies conducted on similar properties to add support to valuation considerations.

8-1
Comment noted.

8-2
Please see Response 7-2.

9-1
Comment noted.

9-2
BPA agrees. The land use section in Chapter 4 identifies the same problems.

9-3
Thank you for your understanding of the issues.

10-1
BPA agrees.

10-2
One of the primary reasons to construct a new 500-kV substation at Wautoma is to eliminate the critical Hanford-Ostrander 500-kV/Hanford-John Day 500-kV double line loss. Both of these lines parallel each other on adjacent ROW for approximately 19 miles. Looping both of these lines into Wautoma allows for a transmission path to be maintained from Schultz to Ostrander and John Day in the event of a Hanford-Ostrander 500-kV/Hanford-John Day 500-kV double line loss.

Upgrading the existing Benton REA 115-kV Blackrock distribution substation was not considered because an additional 4 miles of new 500-kV line would need to be constructed to extend the existing Hanford-John Day 500-kV line to Blackrock.

10-3
Due to existing industry criteria (North American Electric Reliability Council) concerning transmission system reliability, BPA cannot double-circuit two 500-kV transmission lines on the same structure. Structure failure or lightning could remove both circuits from service at the same time. Because 500-kV lines are the backbone of the region's transmission system, any unplanned removal of 500-kV lines from service presents a very big problem for the Pacific Northwest and beyond. Also, the cost to double-circuit is almost double that of a single-circuit line.

BPA can double-circuit 500-kV lines with lower voltage lines (for example, a 230-kV line). Because this double-circuit design also reduces transmission system reliability and is more costly, BPA prefers to keep these double-circuit segments as short as possible and to a minimum.

Along Segment D, BPA has proposed to double-circuit the new 500-kV line and the existing BPA Midway–Vantage 230-kV line for 8 miles between structures 11/1 and 2/4 of the existing Midway-Vantage 230-kV line. This design would minimize long-term impacts to nearby residences and irrigated agriculture (center pivot systems, orchards, and vineyards). However, this design would not minimize the amount of short-term impacts and construction disturbance. In most cases, the new double-circuit tower would not be located in the exact location of the existing single-circuit tower; rather it would be located approximately 50 feet ahead or behind along the line. The body of the single-circuit tower would be removed (below the surface, the footings would remain) and the ground would be made available for cultivation. Using the double-circuit towers in the agricultural area would result in a negligible loss of land that can be cultivated. In non-agricultural areas, the double-circuit design would create the same amount or more construction disturbance (removal of the single-circuit tower and construction of the double-circuit tower within 50 feet of the existing single-circuit tower) to shrub-steppe vegetation than building a parallel single-circuit line.

Beyond the 8-mile area mentioned above, both north and south of the double-circuit section, BPA has proposed to locate the new line parallel and adjacent to the existing 230-kV line. BPA would try to avoid, where possible, impacting sensitive environmental resources such as plants, animals, habitat, and cultural resources by locating structures and new access roads away from these areas. Existing access roads would be used and only short spur roads would be constructed to each new

structure site. BPA realizes that some impact to environmental resources may be unavoidable. In these cases, BPA has proposed mitigation to minimize these impacts. For example, to minimize impacts to birds BPA would use flat configuration structures (see Chapter 2 for an illustration) in some areas to lower structure height and keep all conductors on the same level. Bird flight diverters would be placed on overhead groundwire to help minimize potential avian collision. Construction would be timed to avoid nesting or spawning periods. More mitigation is identified in Chapter 4 within each resource section.

10-4
As you say, BPA does have experience in the area of fire and weed control. BPA and/or their contractors coordinate with local counties on fire and weed control activities. BPA contractors who conduct weed surveys and eradicate weeds are experts in their field. Section 4.3.8.4 identifies efforts that would be made to minimize the introduction and spread of weeds. These activities and practices would be included in a Weed Management Plan for the project. In addition, BPA would use the procedures outlined in BPA's *Transmission System Vegetation Management Program Record of Decision* (August 2000) to address weed problems in subsequent maintenance activities. This document is available for review at:

http://www.efw.bpa.gov/cgibin/PSA/NEPA/SUMMARIES/VegetationManagement_EIS0285

Contractors hired by BPA to construct the new line and access roads would implement measures for fire prevention and fire suppression preparedness in the project area as required by applicable laws and regulations. In Benton County, contractors would also maintain close contact with U.S. Fish and Wildlife Service (USFWS) officials who monitor fire danger levels for the general area and have vehicles that carry fire suppression equipment. More detailed information about fire preparedness is in Section 4.11.5.

BPA plans to revegetate disturbed areas with appropriate seed mixes. BPA would use off-the-shelf seed mixes appropriate for most of the new ROW. For sensitive areas along the new ROW, particularly on the YTC, Saddle Mountain, Columbia National Wildlife Refuge, and the Hanford Reach National Monument, BPA is coordinating with the USFWS, the BLM, and the YTC to define these areas and appropriate seed mixes. BPA is concerned that enough of this seed mixture is available for application after construction would begin. Some seed may need to be collected, grown, and harvested for this purpose.

10-5
Mitigation for shrub-steppe habitat is described in Sections 4.3.8 and 4.4.10.

As additional mitigation for native habitat, BPA is presently reviewing a proposal by the USFWS for restoration of native habitats of the Columbia Basin shrub-steppe ecosystem. BPA is considering purchasing property or contributing to ongoing agency programs/efforts to restore native habitat.

10-6
The absence of a map in the Summary document was an oversight during the printing of the document. Map S-1 in the stand-alone DEIS Summary was the same as Map 2 in the DEIS. We apologize for the inconvenience of not having a map in the DEIS Summary. As an alternative, the full DEIS was available for review. The DEIS included all maps and a full description of the alternatives, affected environment, and associated impacts.

10-7
The Hanford Site was mislabeled as Hanford Reach National Monument on many of the maps in the DEIS. This has been corrected in the FEIS. Because of the map scale, it was easier to identify the Hanford Reach National Monument on Map 8, which details that area.

11-1
Comment noted.

11-2
BPA understands the importance of riparian trees to the ecology of the stream and surrounding land. BPA would only remove those trees that present a safety hazard to the operation of the new transmission line. The BPA Forester has looked at each riparian area and completed a preliminary assessment of the trees to be removed. The factors taken into consideration were transmission line voltage, tree species, height and growth rates, ground slope, conductor elevation above ground, and clearance distance required between the conductors and other objects. A total of approximately 33 trees would be removed from within riparian areas. Section 2.2.3 *Clearing* in this document details the number of trees at each of the five different creeks that would require clearing.

11-3
BPA does not condone unauthorized public use of its access roads and ROW. BPA would work with private and public landowners to install gates and fencing where needed to discourage unauthorized public use.

11-4
Please see Response 11-3. No fords will be constructed for the proposed project. An existing improved ford will be used on Johnson Creek. Access to the project on other streams that currently have fords such as Wilson/Naneum and Caribou Creeks will be from either side of the streams and these fords will not be used.

11-5
A series of rare plant surveys (August 21-23, 2001, April 9-12, May 8-18, May 22-26, June 11-13, July 17-19, and July 24-25, 2002) have been conducted for the proposed ROW and access roads along the Preferred Alternative (Segments A, B_{SOUTH}, and D) to identify populations of federally-listed threatened and endangered plant species and state listed plant species. This information will be used to avoid, where possible, locating new structures or access roads within or near these populations. A field reconnaissance was done for the fiber route. Since no new roads would be built, no impacts to plants would occur. Another survey of the Hanford Monument will take place in Spring 2003 to identify populations of sensitive plants for survey areas, tower sites, and access roads.

11-6
Please see Response 10-4.

11-7
The project botanist has been alerted to the presence of *Iliamna longisepala* near the proposed crossing of Naneum Creek.

12-1
Comment noted. Thank you for the feedback that the public meeting was helpful and informative.

12-2
Please see Response 12-1.

13-1
Comment noted.

13-2
You are correct, although the new tower footprint would be slightly larger due to the larger tower.

BPA is working closely with landowners along Segment D to determine whether tower locations need to be moved to improve existing situations. BPA worked with the tenant of the southeast quarter section and was able to adjust the placement of the towers on the circle boundary to better accommodate farming.

13-3
BPA would work with the WDNR to discuss ROW easements on state trust lands affected by the project.

14-1
BPA contracted with the Yakama Nation to conduct an intensive on-the-ground cultural resource survey that began on April 22, 2002. The survey included the Preferred Alternative ROW, proposed access roads, and disturbed areas from fiber optic installation. Because Cooke-Coleman LLC refused BPA and its contractors entry to their property (see Response 17-5), a survey of the Segment A Reroute could not be done. The results of the cultural resource survey are summarized in Chapters 3 and 4 of the FEIS.

14-2
Please see Response 14-1.

14-3
Please see Response 14-1.

As clearly stated in Appendix B of the FEIS, the Segment A Reroute is not part of the Preferred Alternative. If it was and BPA chose to construct the Preferred Alternative, a cultural resource survey along the Segment A Reroute would be conducted prior to construction.

14-4
The DEIS contains the same level of detail for all alternatives. This information is a combination of existing information and field reconnaissance. Detailed field studies were not completed for the alternatives in the DEIS. With over 160 total miles, this would be cost-prohibitive. Detailed wetland, botanical, wildlife, cultural resource, and weed field studies were completed for the Preferred Alternative and are summarized in the FEIS. The Segment A Reroute is not included in the Preferred Alternative. If further surveys are required, they would be completed during the survey season of 2003.

Also, please see Responses 14-1 and 14-3.

15-1
Rights-of-way acquired by BPA for this project would be federally held. Any land acquired for the building of a substation would be owned by the federal government in fee.

15-2
The proposed project is a federal project owned, operated, and maintained by BPA. Therefore, obtaining county-level critical areas ordinance and zoning reviews would not be required. BPA would work towards meeting or exceeding the substantive standards and policies of the county zoning and critical area ordinances and comprehensive plans.

15-3
Existing roads and existing stream crossings would be used where practicable. Sensitive areas have been identified in the field, including wetlands. New towers and access roads have been located so as to avoid sensitive areas to the greatest extent possible. BPA would design stream crossings to minimize impacts, as suggested.

16-1
The site-specific details that are referenced were unavailable at the time the DEIS was prepared. BPA has now located towers and access roads along the Preferred Alternative, and field surveys have been conducted. More detailed information on the Preferred Alternative was used to update the FEIS.

16-2
Please see Response 10-3.

16-3
BPA will submit a Joint Aquatic Resources Permit Application (JARPA) to obtain a Hydraulic Project Approval (HPA) from the WDFW, as required. 10 perennial streams or rivers are crossed by the project. Only one of these streams will require crossing improvements. Schnebly Creek will require the replacement of an undersized culvert on the existing BPA access road. This culvert replacement will be done during either the WDFW primary or secondary preferred in-water work window of July 15-August 15 or June 15-July 15. The reach of Schnebly Creek where the existing road crosses is usually dry during this time. Towers placed on either side of the remaining nine perennial creeks or rivers will be accessed from either side or by using existing culvert or bridge crossings. Many intermittent or ephemeral streams will require culvert replacement or the addition of crushed rock at existing or new crossings. BPA will review the project with the state designated biologist and design crossings according to HPA requirements. JARPA permits would include design details and identify any additional mitigation that may be required.

16-4
Comment noted.

16-5
Please see Response 16-3.

16-6
Please see Response 16-3.

16-7
BPA will prepare the necessary documents, drawings, and photographs for each crossing, as required. In addition, BPA would like to conduct a field review with WDFW to ensure that BPA and WDFW both understand the crossing designs and potential associated issues.

16-8
The level of wetlands work done for the DEIS consisted of a review of available information and a field reconnaissance of the area to determine the presence/absence of wetlands and to estimate their extent. The design process for the Preferred Alternative and further wetland field review has provided the level of detail to further analyze impacts and make design adjustments in order to avoid impacts to wetlands where practicable.

Access road design involved environmental specialists working with the road engineer to determine if the current design would impact any wetlands and moving access roads where possible to avoid impacts.

A wetland delineation has been completed for the few unavoidable wetland impacts. A permit application for these impacts is being prepared and will be submitted to the U.S. Army Corps of Engineers, Washington State Department of Ecology, and other appropriate agencies in accordance with the Clean Water Act.

16-9
Comment noted.

16-10
BPA has tried to acknowledge cumulative impacts in each resource discussion in Chapter 4. BPA agrees that this is a difficult area of assessment. Cumulative actions/impacts refer to past, present, and future foreseeable actions/impacts. While the past and present are obvious, what impact future actions might have on a resource is difficult to predict. Please see Response 10-5.

16-11
Please see Response 10-5. The quantities for areas disturbed by the project have been updated in the FEIS.

It is difficult for BPA to take a broad overview of total impacts associated with all of BPA's projects. Even though BPA is working on several projects at the same time, it is unknown which of the projects will actually be constructed. Several of the projects are a result of new generation facilities. If these generation facilities are not constructed (as of this printing, several of these projects have been put on hold), the associated BPA-portion of the project also goes away. Financing is also different from one project to another. Sometimes, financing comes from a third party. BPA plans to finance the Schultz-Hanford Area Transmission Line Project. Due to the critical nature of each project, each project stands on its own merit. Mitigation is usually associated with one project only. BPA is presently exploring the opportunity to combine mitigation efforts with one other transmission line project in Eastern Washington. This might involve restoration or protection efforts.

17-1
Mr. Jeff Slothower (attorney with Lathrop, Winbauer, Harrel, Slothower & Denison L.L.P.), representing Cooke Coleman LLC (manager and sole member to be Mr. Gaylord Kellogg), contacted

the Bonneville Power Administration on July 11, 2001, requesting more information on the location of the proposed new transmission line in relation to his client's property. At that time, BPA was not proposing a reroute, referred to as the Segment A Reroute, and Mr. Slothower was informed that the new line was proposed to be north of the existing line. The new line would not cross Cooke Coleman LLC property. BPA answered Mr. Slothower's questions and agreed to fulfill his request to be added to the mail list to receive future mailings and meeting notices.

By October 2001, BPA decided to study a reroute around the tribal allotment. Because the Segment A Reroute was not proposed until October 2001, no information concerning this reroute would have appeared in the Notice of Intent (November 9, 2000) or four letters sent to the public (December 12, 2000, March 26, 2001, June 6, 2001, and July 30, 2001). The Segment A Reroute could not have been included in the scoping notice, scoping meetings, and four letters sent to the public, because it was not proposed at that time. Also, since the Segment A Reroute mostly crossed one private landowner's property, Cooke Coleman LLC, a letter was not sent to the entire mail list. Instead, a BPA representative contacted Cooke Coleman LLC's attorney (still Mr. Jeff Slothower) by phone on November 8, 2001 to personally discuss the Segment A Reroute and its potential to affect his client's property.

The BPA representative also indicated that BPA would be sending Permission to Enter Property (PEP) forms for his client to sign that would allow BPA permission to enter the property to conduct certain studies. The BPA representative recalls that Mr. Slothower agreed to send the forms to Mr. Gaylord Kellogg and added that his client would not be very happy about this new development. BPA sent a letter, referring to the telephone conversation, with the PEP forms attached to Mr. Slothower on November 8, 2001.

This was Cooke Coleman LLC and Mr. Gaylord Kellogg's first opportunity to learn of the Segment A Reroute.

17-2

As stated in Response 17-1, the Segment A Reroute could not have been included in the scoping notice, scoping meetings, and four letters sent to the public, because it was not proposed at that time. As described in Response 17-1, Cooke Coleman LLC's first opportunity to learn of the Segment A Reroute was on November 8, 2001, soon after BPA decided to study a reroute. BPA made both a personal telephone call and sent a letter to Mr. Slothower, who was the attorney representing Cooke Coleman LLC and Mr. Gaylord Kellogg.

BPA received a response letter from Mr. Jeff Slothower, dated November 20, 2001, stating that the information in BPA's November 8, 2001 letter had been forwarded and discussed with his client, Cooke Coleman LLC.

After contact was made and information exchanged with Cooke Coleman LLC, BPA continued to study the Segment A Reroute and, as required by National Environmental Policy Act (NEPA), included information in the DEIS describing this reroute. No other contact by Cooke Coleman LLC was made with BPA until availability of the DEIS was announced in the Federal Register and by letter. The Notice of Availability announcing the availability of the DEIS was published on February 8, 2002. Letters were sent to the parties on the mail list. A 45-day comment period for the DEIS, as required by NEPA, closed on March 25, 2002. BPA responded to Cooke Coleman LLC's request by e-mail on February 7, 2002 for copies of the DEIS to be sent via Federal Express.

17-3
As stated in Response 17-1, the Segment A Reroute could not have been included in the scoping notice or scoping meetings because it was not proposed at that time. BPA did not propose the Segment A Reroute until October 2001. As can happen with very large transmission projects like this one, an original proposal can change to accommodate new information. The Segment A Reroute was proposed in response to new information. Cooke Coleman LLC and Gaylord Kellogg were first notified of the Segment A Reroute on November 8, 2001. Mr. Kellogg had 45 days to comment on the DEIS, which was the same amount of time given to other landowners whose property was also proposed to be crossed by the new transmission line. A 45-day comment period is provided so that affected individuals can provide meaningful comment on the proposal.

In Mr. Kellogg's attempt to obtain public information from BPA, it is unfortunate that Mr. Kellogg and his second attorney, Mr. Harrel, waited until February 2002 (over 3 months after Mr. Kellogg's first notification by BPA of the Segment A Reroute) to send two Freedom of Information Act (FOIA) requests to BPA (February 12, 2002 and February 26, 2002) as this did not allow BPA enough time to fully respond to the FOIA requests before the close of the DEIS comment period on March 25, 2002. In responding to the FOIA requests, BPA needed to take 10-day working extensions, allowed by statute, to fully respond to both FOIAs. Partial responses were sent on March 15, 2002 and March 27, 2002. Final responses were sent on March 28, 2002 and April 10, 2002.

17-4
On March 20, 2002, BPA responded to Mr. Harrel's written request for BPA to prepare a supplemental DEIS. A portion of the letter is quoted here.

> "At this time, BPA does not intend to prepare a supplemental DEIS. BPA considers the description and analysis of the Segment A Reroute in the DEIS sufficiently detailed for public comment during the 45-day comment period that began on February 8, 2002. The possible re-routing of this approximate one-mile segment does not, in BPA's view, pose potentially significant impacts to the human environment. BPA recognizes that public comments received during the DEIS comment period allow an agency to improve its proposed action, thereby leading to better, more informed decisions. BPA looks forward to receiving comments on the Segment A Reroute and other portions of the project. All comments will be responded to in the Comment/Response section of the FEIS and appropriate changes will be made to the document at that time."

BPA has provided an explanation for proposing the Segment A Reroute and added additional information on the Segment A Reroute in Appendix B of the FEIS. A supplemental DEIS is not needed.

17-5
BPA's environmental team used a variety of methods to study the Segment A Reroute. Study methodology included field visits, aerial photography review, literature research and review, state and federal database queries, and contact with local, state, and federal agency representatives.

Field visits were restricted to observation of the Cooke Coleman LLC property from the nearest public access because Cooke Coleman LLC refused access to BPA. In BPA's November 8, 2001 letter to Mr. Slothower (Cooke Coleman LLC attorney), BPA attached Permission to Enter Property

forms for his client's review and signature. These forms, when signed, would allow BPA access to the property to perform certain studies. Mr. Slothower's November 20, 2001 response letter served

> "as notice that Cooke Coleman LLC was not willing to grant BPA staff, employees, contractors, subcontractors, or others working for or on behalf of BPA access to the Cooke Coleman LLC property for any purpose. Accordingly, Cooke Coleman LLC is not signing the Permission to Enter Property forms you forwarded to me.
>
> Please also accept this letter as formal notice to the Department of Energy, Bonneville Power Administration, its employees, contractors, subcontractors, consultants, and any others working for or on behalf of the Department of Energy, Bonneville Power Administration, that they are not allowed to access any property owned by Cooke Coleman LLC. Furthermore, any access by Department of Energy, Bonneville Power Administration, its employees, contractors, subcontractors, consultants, and any others working for or on behalf of the Department of Energy, Bonneville Power Administration will be treated as a trespass by Cooke Coleman LLC."

BPA and its contractor environmental specialists conducted an analysis of the Segment A Reroute and included a description of the results of that analysis in Chapters 3 and 4 in the DEIS. Without access to the property itself, the scale of the aerial photography, details contained in available databases and in the literature, and limited detailed knowledge of private property from local, state, and federal agency representatives, BPA concluded in most cases that the impacts would be similar to those reported for Segment A. BPA has included additional language in Appendix B in the FEIS to help the reader better understand the Segment A Reroute impacts.

17-6
Please see Responses 17-5 and 17-7.

17-7
The description of the Segment A Reroute in the DEIS was not clear; an improved description has been included in Appendix B of the FEIS. The descriptions of the alternatives, including the Segment A Reroute, were written using common landmarks and were intended to accompany the maps in the DEIS. The maps were correct and were intended to provide interested persons or agencies with the locations of alternatives to the level of detail that BPA had available at the time the DEIS was printed.

17-8
BPA agrees that "southeast" should have been used in the description of Segment A Reroute instead of "south." This has been corrected in the FEIS. The map in the DEIS and FEIS clearly and correctly illustrates the Segment A Reroute. BPA disagrees with the commenter's implied conclusion that the entire impact analysis for the reroute is incorrect because the location description was slightly incorrect.

17-9
The Segment A Reroute is an option that can be chosen or not chosen to be added to Segment A. In the DEIS, each of the alternatives (Preferred Alternative and Alternatives 1, 1A, and 3) included Segment A without the Reroute as part of its alignment. Therefore, the text and tables that quantify the Segment A length in the DEIS did not include the Segment A Reroute. Please refer to Response 17-7 regarding the clarification made to the descriptions of alternatives.

17-10
Not mentioning the Segment A Reroute in the Summary was an oversight and has been corrected. The estimated cost of the Segment A Reroute has been added to the FEIS. As stated in Response 17-9, the optional reroute was not included in any of the alternatives. The Summary briefly describes overall impacts of the alternatives. The inclusion of impacts associated with the Segment A Reroute, which would add approximately one-quarter mile to Segment A, would not substantially change the overall impacts associated with the 58- to 70-mile alternatives.

17-11
The DEIS did not clearly describe the impacts of removing the existing Schultz-Vantage line and moving it to the south. This information has been added to Appendix B in the FEIS.

17-12
For the Segment A Reroute, 350 feet of new ROW would be needed for both the new and existing line (75 feet from the center line to the edge of the ROW for each line and 200 feet between the two lines). If the Segment A Reroute were chosen, the existing line that presently crosses the tribal allotment would be removed and constructed next to the new line across Cooke Coleman LLC property. Segment A Reroute is not preferred. A more complete description of these activities and an analysis of associated impacts have been added to Appendix B of the FEIS.

17-13
Clearing and access roads associated with the Segment A Reroute were not included in Sections 2.2.3 and 2.2.4 in the DEIS. A discussion of the clearing associated with towers and access roads for the Segment A Reroute has been added to Appendix B in the FEIS.

17-14
The Segment A Reroute would disturb approximately 4.1 more acres of land area than the original Segment A alignment described in the DEIS.

The construction of Segment A Reroute would disturb additional soil surface and have the potential for additional erosion, sedimentation, and runoff at or near Cooke Creek; impair soil productivity; and remove 0.3 acres of land from production.

The amount of riparian vegetation cleared under the Segment A Reroute would be less than or at most equal to that of the original route because the original route crosses a wider riparian area containing tall cottonwoods and willows that would need to be cleared. Only taller riparian vegetation such as cottonwoods and willows would need to be removed for conductor clearance purposes. The Segment A Reroute crosses 4 to 5 small channels with narrower areas of smaller riparian vegetation, most of which would likely not need to be cleared.

A search of the Washington Natural Heritage Program database and discussions with WDFW, WDNR, USFWS, and independent botanists and biologists did not indicate that the area of the Segment A Reroute harbored fish and wildlife species or plant assemblages unique to the region or substantially different than the original proposed route and surrounding areas (BPA was denied permission to enter the property to conduct detailed biological surveys). If the Segment A Reroute were to be chosen, the overall impacts (described for the original Segment A) on vegetation, wildlife, and fish would remain the same.

Appendix B in the FEIS contains a more detailed analysis of the Segment A Reroute.

17-15
Please see Response 14-1.

17-16
BPA has added more detail to the description of the Segment A Reroute in Appendix B of the FEIS. Also, please see Response 17-4 regarding preparation of a supplemental DEIS.

17-17
Please see Response 17-14 regarding vegetation impacts.

Field surveys were conducted in August 2001 along the Preferred Alternative to identify late-blooming rare species and to search for potential habitat for other rare species habitat to be surveyed in 2002. A second year of field surveys was conducted throughout spring to late summer in 2002. A professional botanist skilled at identifying plants in the Columbia Basin was retained to conduct rare plant surveys during the correct time of year to identify the species with the potential to occur in the area. The surveys were done at a level of intensity to ensure that if rare species are present, it is likely that they would be found. The results of rare plant surveys are included in Appendix F, Rare Plant Survey for the Preferred Alternative of the FEIS.

As explained in Responses 17-5 and 14-1, Cooke Coleman LLC has refused BPA entry to their property; therefore, a detailed survey of the Segment A Reroute on their land could not be conducted.

Also, please see Response 17-4 regarding preparation of a supplemental DEIS.

17-18
Cooke Creek is the correct name. All occurrences of "Cooke Canyon Creek" in the EIS and Appendices have been corrected to read "Cooke Creek."

17-19
Please see Response 17-5. At the time that the analysis for the Segment A Reroute was completed, BPA made the decision not to revise the Fish and Wildlife Technical Report in the DEIS Appendix to include the new information, but to include it only in Chapters 2, 3, and 4 of the FEIS. Similarly, BPA has not revised the Fish and Wildlife Technical Report for the FEIS Appendix but has added information in Appendix B on the Segment A Reroute.

Also, please see Response 17-4 regarding preparation of a supplemental DEIS and Response 17-14 for a response to comments regarding impacts on wildlife species.

The definition of riparian vegetation in the DEIS glossary is inadequate. According to the USDA Natural Resources Conservation Service (1996), "Riparian areas are lands that occur along watercourses and water bodies. Typical examples include floodplains and streambanks. They are distinctly different from surrounding lands because of unique soil and vegetation characteristics that are strongly influenced by the presence of water." The American Fisheries Society (1998) defines riparian vegetation as "Vegetation growing on or near the banks of a stream or other water body that is more dependant on water than vegetation that is found further upslope." It is generally accepted

that riparian vegetation is significantly different from surrounding upland vegetation, which in the area where the Segment A Reroute crosses Cooke Creek is shrub-steppe composed mostly of sagebrush. Shrub-steppe vegetation near Cooke Creek is indistinguishable from upland areas and cannot be considered riparian vegetation. The riparian areas along Cooke Creek and most other streams along Segment A exist as thin strips of cottonwoods, willows, and shrubs following individual stream channels.

As described in Response 17-4, the amount of riparian vegetation (taller cottonwoods and willows) removed along the Segment A Reroute would be less than or, at most, approximately equal to the amount removed from the original Segment A alignment.

17-20
Please see Response 17-5. The Segment A Reroute has been added to all maps in the FEIS. At the time that the analysis for the Segment A Reroute was completed, BPA made the decision not to revise the Fish and Wildlife Technical Report in the DEIS Appendix to include the new information, but to include it only in Chapters 2, 3, and 4 in the DEIS. Similarly, BPA also has not revised the Fish and Wildlife Report for the FEIS Appendix but has added information in Appendix B on the Segment A Reroute.

Also, please see Response 17-4 regarding preparation of a supplemental DEIS.

Please see Response 17-19 for a definition and discussion of riparian vegetation. Impacts to fish species in Cooke Creek from removal of riparian vegetation would be the same or lower for the Segment A Reroute as for the original Segment A alignment. Tower sites would be located well back from any channels of Cooke Creek and access roads would not cross the creek, which is similar to the original Segment A alignment. The topography of the area slopes parallel to Cooke Creek, so any sediments or pollution resulting from construction in upland areas would not flow directly into the creek. Best management practices proposed for construction near streams would prevent sediments and pollutants from leaving construction sites. Overall, impacts to fish species present in Cooke Creek would be the same for both the original alignment and the Segment A Reroute.

17-21
Please see Response 17-5. The Segment A Reroute has been added to all maps in the FEIS.

At the time the DEIS was published, BPA did not have detailed information on access roads. The access road study has been completed for the FEIS. No access roads have been proposed to be built for the Segment A Reroute.

BPA commends Mr. Kellogg for taking steps toward restoring portions of the Kellogg Family Ranch to a natural state as it existed prior to widespread cattle grazing.

BPA disagrees with Mr. Harrel's conclusions regarding the impact discussions in the DEIS. Additional analysis of impacts on floodplains and wetlands along the Segment A Reroute has been added to Appendix B of the FEIS.

17-22
Additional discussion and analysis of impacts on land use along the Segment A Reroute have been added to Appendix B of the FEIS.

17-23
Please see Response 7-3.

17-24
Please see Responses 17-1, 17-2, 17-4, and 17-5.

The electric fields, magnetic fields, and corona effects (audible noise, radio interference, television interference, and visible light) levels from the proposed 500-kV line and the relocated Vantage-Schultz 500-kV line in the proposed Segment A Reroute would be comparable with those along other sections of the route. The presence of two transmission lines on a 350-foot ROW would increase the ROW area over which fields and corona-related quantities are present. However, the levels on the ROW would not exceed, and the levels at the edge of the ROW and beyond would not be different, from those described in the DEIS for the remainder of the route. Therefore, the impacts associated with electromagnetic field (EMF) and corona effects would be similar to those described in the DEIS and the basic conclusions of Appendix I, Electrical Effects remain unchanged for the Segment A Reroute section.

A second addendum to Appendix I, Electrical Effects is being prepared to quantify field and corona effects levels along the sections in Segment A where the proposed line would be located 200 feet from the existing Vantage–Schultz 500-kV line. This includes the Segment A Reroute section.

Noise from vehicles, aircraft and other equipment, air quality issues, and management of toxic and hazardous substances would be the same for the Segment A Reroute section as for other sections of the proposed line during construction, operation, and maintenance; therefore the discussion of these impacts presented in the DEIS applies to the Segment A Reroute section as well as the rest of the route.

It is not expected that concrete would be used for footings of support structures along the Segment A Reroute. The support structures would likely be attached to steel plates or grillages that are placed within the excavated area. It is not anticipated that the addition of a transmission line and relocation of the existing line would alter the elevation of the groundwater along the Segment A Reroute. Excavations for the support structures for these two transmission lines would have a low, localized, temporary impact to groundwater if it is less than 6 to 10 feet deep. The impact would be even less if the groundwater were deeper.

17-25
The Segment A Reroute has been added to all maps in the FEIS.

Additional discussion and analysis of impacts on visual and recreational resources along the Segment A Reroute have been added to Appendix B of the FEIS.

Also, please see Response 17-4 regarding preparation of a supplemental DEIS.

The DEIS recognized the visual importance of the area around the Segment A Reroute, as demonstrated by the location of "Visually Sensitive Viewpoint A," indicated on Map 10 and discussed in section 3.9.1.1. Visual impacts of the Segment A Reroute would indeed be higher at viewpoint locations closer to the reroute (particularly locations within 0.5 mile) and, as demonstrated by the comment, all viewers from the Kellogg Ranch are apparently extremely sensitive, which

supports the definition of "High Visual Sensitivity" provided by the EIS in the sidebar of section 3.9.1. Impacts would be high to moderate for residential properties within 0.5 mile of the Segment A Reroute.

Colockum Pass was identified as a Visually Sensitive Area due to the number of residences with foreground views of the proposed transmission line project(s). The photograph for "Visually Sensitive Viewpoint A" is taken from Gage Road. Cooke Canyon Road and Coleman Road are in this general area as well, but contain fewer residences within 0.5 mile.

No public recreation resources were identified, and no private recreation activities conducted on privately owned lands (such as camping, broom hockey, and all-terrain vehicle usage) were known during the preparation of the DEIS. Thus, no discussion of recreational activities in this area was presented. These identified private activities have been addressed in Appendix B of the FEIS. However, placement of two proposed transmission lines along the Segment A Reroute alignment would not prevent the identified activities from occurring elsewhere on the private property, including within the transmission line ROW and around the transmission line towers. Appendix B of the FEIS has been written to clarify the impacts to recreational activities from Segment A Reroute.

17-26
Please see Responses 17-4, 17-5, and 17-15.

18-1
Please see Response 10-6.

18-2
It is unfortunate that you did not find our public meetings helpful. BPA tries to provide a welcoming environment for the public in order to answer their questions and to record their comments. Often times in this kind of setting a number of people will stand together at a station/table giving comments as a group, or as you said, participating in a public dialogue. BPA is not required to hold a public hearing where members of the public stand before the group and give testimony. BPA has found that the open house meeting style is very successful in generating dialogue between agency representatives and the public.

18-3
Comment noted. BPA has met or exceeded all public involvement requirements per the CEQ regulations and DOE Guidelines Implementing NEPA.

18-4
BPA agrees with your assessment. That is one reason BPA has chosen Alternative 2 as the Preferred Alternative (Segments A, B_{SOUTH}, and D).

Along Segment A, the new line would parallel BPA's existing 500-kV Schultz-Vantage line at a distance of up to 1400 ft. The reasoning behind this required separation is explained in Response 10-3. More information is also contained in Appendix D, Line Separation Issue Paper.

For most of its length, Segment B_{SOUTH} would parallel an existing lower voltage 230-kV line at a separation of 125 feet. Segment B_{SOUTH} was preferred by the Army.

Segment D parallels existing BPA 230-kV lines at a separation of 125 feet from the existing lines. Along an 8-mile double-circuit section, between structures 11/1 to 2/1 of the existing Midway-Vantage 230-kV line, the existing ROW would be expanded 25 feet on the west side to accommodate the new large double-circuit structures.

18-5
Please see Responses 10-3, the last paragraph of 10-4, and 10-5.

As stated in Response 10-3, replacing the existing single-circuit towers with double-circuit towers would not reduce the amount of construction disturbance. It is true that there would be only one set of towers, but if the issue is disturbance to a fragile ecosystem, the damage has already been done by the existing towers. In some cases, enough time has passed that some of the vegetation has recovered around the towers, to take the tower out now would disturb the area again. BPA would locate the new double-circuit towers near the existing towers and then remove the existing towers so the footprint of two towers would cause disturbance for every one double-circuit tower. In using the double-circuit towers, the cost would be almost double that of the single-circuit towers and would increase the amount of construction disturbance. In addition, double-circuit structures would be about 40 feet taller than single-circuit structures. Depending on the area, this could increase visual impacts and/or avian collision. The double-circuit structures would hold six bundles of conductor on three levels (see illustration of structure in Chapter 2).

As the new line crosses the Columbia River, north of Midway Substation, it would be located to the west of the existing lines that cross the river. The existing lines are both BPA and Grant County 230-kV lines. Although BPA could double-circuit with another BPA 230-kV line (as explained in Response 10-3), the new line cannot be double-circuited at this point because it is not being routed into Midway Substation as is the existing line, but rather around and to the west of the substation. Avoiding Midway Substation requires the westernmost alignment of the new line as it crosses the Columbia River. In addition, BPA cannot locate the new line over Midway Substation because of reliability and safety issues. South of Midway Substation, the new 500-kV line would parallel BPA's existing Big Eddy-Midway 230-kV line at a 125-foot separation. Through the Hanford Monument, BPA is planning to construct the new line using flat configuration structures to reduce impacts on birds.

19-1
In Section 1.1 of the DEIS it is stated that "…During spring and early summer months, the amount of power that needs to move through this area exceeds the carrying capacity of the existing transmission lines…." In order to accommodate additional power transfers through this area, more transmission capacity must be made available so that system reliability will not be compromised in the event of an outage. The term "maintain system reliability" was meant to describe the ongoing efforts to reinforce the transmission system for today's needs and future uses, and to meet higher reliability standards supported by the electric industry reliability council (North American Electric Reliability Council, NERC).

19-2
BPA agrees that the primary purpose of an EIS, as stated at 40 CFR 1502.1, is to serve as an action-forcing device to inform the decision-maker, and that NEPA does not allow an agency to define its purpose and need so narrowly as to unreasonably restrict the array of alternatives. However, BPA, as a federal agency, has the discretion and expertise to define the purpose and need for the action that

it is proposing to take. BPA has defined the need for action for this project in Section 1.1 in the DEIS and FEIS in relatively broad terms. Moreover, in this instance, BPA must look at constraints and limitations of its existing transmission grid that impede BPA's mission to provide reliable and cost effective energy to its customers. Naturally, the location and nature of identified constraints and limitations have an effect on the types and locations of actions BPA may need to consider to remedy such constraints and limitations. Please note, BPA has added a section in the FEIS under Section 2.7, *Alternatives Eliminated from Detailed Consideration*, that describes BPA's study of non-transmission line alternatives, including those you have identified in this comment letter. This section in the FEIS explains that non-transmission alternatives were not reasonable alternatives to meet the need as described in Chapter 1.

19-3
BPA respectfully disagrees that the actual need and purpose of this project is to increase system reliability. Although maintaining transmission system reliability is certainly an important purpose, there are several other purposes stated in Section 1.2 of the DEIS. Notably, optimization of transmission system usage is also identified, which includes the ability to carry greater electrical loads to meet rising electrical demand and the ability to transmit electricity from one area to another. Certain areas are, in fact, in greater need of system fixes than others. BPA believes it has identified neutral, yet important project purposes, and that BPA is looking at the reasonable array of alternatives that meet the identified project need. In addition, please see Response 19-2.

19-4
Please see Responses 19-2 and 19-3.

19-5
The need for action is insufficient transmission capacity to accommodate additional power transfers through the north of Hanford area. By increasing the transmission capacity north of Hanford additional power transfers can be accommodated while maintaining system reliability. Distributed renewable generation is now only becoming a viable alternative to central plant generation, but cannot, in the next 5 or 10 years, make enough of an impact on energy use to delay the need for this project. BPA has been a major player in regional conservation for the past 30 years, which has reduced the energy needs of the Pacific Northwest substantially. However, the potential for reduced energy use from conservation and the benefits of distributed generation combined cannot eliminate the need for this project. Since the DEIS was written BPA was involved in the construction of several large wind generation project in central Washington, there are still a few more possible in the near future and this will continue to strain the transmission system in that area. Major transmission reinforcement is and will be required to benefit from earth-friendly generation sources.

Please see Responses 19-1, 19-2, 19-3, and 19-4.

19-6

Please see Response 19-5.

19-7
Some of the lost generation due to spilling water for salmon transportation could be made up through distributed renewable energy near the lower Snake and Columbia Rivers. However, during the spring and summer months, electricity generated in Canada and at dams along the mid- and

upper-Columbia River moves south through central Washington to load centers in Seattle and Portland, and through the Southern Intertie to meet market demands.

19-8
Please see Responses 19-5 and 19-7.

19-9
Please see Responses 19-5 and 19-7.

19-10
Please see Responses 19-2 and 19-3. BPA has been undertaking studies and investing in on-the-ground conservation and encouraging renewable generation for many years, including a recent infusion of money into, among other things, wind generation. We agree that conservation and renewable energy generation remain an important part of our overall mission. However, it should be noted that our energy forecast already has taken foreseeable conservation and renewable generation into consideration.

19-11
Please see Responses 19-1 to 19-10.

19-12
Part of BPA's responsibilities in the region include helping meet the region's energy needs. As presented in your comment, every project that BPA proposes or is partner to in the past, present, and foreseeable future that helps meet the region's energy needs would qualify as cumulative impacts under NEPA, and should be described in the EIS. Past projects are already completed and, since the inception of NEPA, environmental coverage on these projects has been completed. Most future projects are too speculative at this time to require compliance with NEPA, but as they are proposed, each project will require NEPA coverage. The projects you have identified have independent and distinct purposes and needs, and the decision to implement one project is not dependent on the implementation of the others. They each address certain regional needs and have independent utility. Moreover, trying to include all of these projects in one EIS would make that NEPA process unwieldy, which would tend to obscure the many potentially significant impacts of the many projects, and likely discourage, rather than encourage, meaningful public review. Dealing with so many projects and alternatives within a single document would also tend to complicate the nature of the decision at issue, and potentially hinder, rather than clarify, decisions for the decision-maker. At that scale, detailed impacts could not be revealed effectively because data presentation would need to be at such a large scale.

BPA has a responsibility to provide NEPA coverage on actions that it proposes. The agency uses its discretion and the DOE rules on implementing NEPA to determine the scale of the proposed federal action, and the manner and level of NEPA coverage for each proposed project. BPA believes the proposed Schultz-Hanford Area Transmission Line Project is being presented to the public and the decision-maker at the appropriate level and scale for meaningful review.

19-13
BPA follows the Transmission System Vegetation Management Program DOE/EIS-0285 for managing vegetation on rights-of-way and at facilities. This program identifies buffer widths that vary based on herbicide toxicities (defined for each herbicide by concentration), characteristics, and the type of

application used near water bodies, agricultural irrigation, domestic/public drinking water wells, water intakes/spring developments, and sole source aquifers. For example, the use of a moderately toxic herbicide near a water body would require a 25-foot buffer between the water's edge and the edge of the application area if using spot application. If, for example, aerial application would need to be used for the same herbicide, a 250-foot buffer would be required between the water body and the edge of the application.

It is anticipated that there would be low to no impact on water quality from the use of herbicides to control vegetation near water bodies. BPA would follow the Transmission System Vegetation Management Program, which is included in the FEIS as mitigation for impacts to vegetation.

19-14
The "distributed renewable energy generation" is not an alternative that is being considered in this EIS. It does not meet the purpose and need for the project. Please see Responses 19-5 and 19-7.

19-15
For a discussion of public health and safety impacts from the two gas-fired plants identified in Chapter 1, please see the EISs for those projects. The Starbuck Power Project is presently on hold and a DEIS will not be released to the public at this time. The FEIS for the Wallula Power Project was released to the public in August 2002. BPA is currently awaiting approval from the governor of Washington before BPA writing a Record of Decision. Construction of future gas plants as a result of this transmission line project is highly speculative and beyond the scope of this EIS.

19-16
Under the USA PATRIOT Act (Pub. L. No. 107-56, § 1016) "A continuous national effort is required to ensure the reliable provision of cyber and physical infrastructure services critical to maintaining the national defense, continuity of government, economic prosperity, and quality of life in the United States." "Critical infrastructure" is defined by the act as "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters." The White House publication "The National Strategy for Homeland Security" includes the energy sector as a component of critical infrastructure (see page 30).

In support of national efforts to prevent domestic terrorism, BPA limits the distribution of maps (particularly in electronic format) that detail facilities critical to sustaining the reliability of its transmission system and the energy infrastructure of the Pacific Northwest, while adhering to public information laws and guidance from the Department of Energy, the Office for Homeland Security, Congress, and the President.

Consistent with BPA's Open Access Transmission Tariff, BPA does not take a position on the choice of energy resources used by others in the Pacific Northwest where BPA's involvement is limited to the request for interconnection.

19-17
See Response 19-15. This response also applies to air quality and all other environmental resources.

20-1
After receiving your comment we have attempted to obtain a copy of the Nature Conservancy's report that you sited but have been unable to do so. Other reports authored by the Nature Conservancy were used in this EIS and can be found in the References Chapter.

20-2
Please see Responses 10-3 and 18-5.

20-3
Please see Responses 10-3 and 18-5.

20-4
Please see Responses 10-3, 10-5, and 18-5.

20-5
Please see Response 19-12. Each of the projects listed in Section 1.6 of the DEIS and FEIS is undergoing their own NEPA analysis. If BPA were to analyze all of the actions it is presently undertaking in one EIS, the scale of the analysis would be much too large, too general, and would likely obscure the type, abundance, and level of impacts that may occur. BPA believes that analyzing all of these projects, purposes, and alternatives in a single document would be counter-productive, and would not truly reveal the more detailed impacts that would be present. Furthermore, proposed mitigation at this scale would be extremely complex and would be more effectively dealt with on a project-by-project basis. However, BPA understands your concerns regarding cumulative impacts, and has tried to acknowledge and address cumulative impacts to each resource in Chapter 4.

20-6
Please see Response 10-5.

20-7
Mitigation measures described in the EIS will be written into the specifications of the construction contract. The contractor will be responsible for abiding by the conditions of the contract. A separate professional environmental and erosion control contractor will be used to provide construction monitoring which would include preparing erosion control plans and BMP's for all sensitive areas and disturbances, then constructing, monitoring and maintaining these BMP's. The same company would monitor construction crews during construction and conduct final stabilization and monitoring of stabilized areas after construction. The BMP's would include measures for limiting the amount of disturbance to shrub-steppe and preventing the spread of noxious weeds. Long term monitoring of revegetation success and long term weed control would be accomplished by BPA maintenance. BPA may also work with landowner agencies and other state or federal agencies to monitor sensitive habitat status.

20-8
A Mitigation Action Plan will be developed as part of the construction specifications. Sensitive areas requiring avoidance as well as revegetation directions, including seed mixes, will be included. BPA has contacted local seed suppliers in order to have adequate supplies of native seed mixes available after construction.

21-1
The Segment A Reroute goes around a tribal allotment. The question of if this property has been used for any recent cultural activities would need to be referred to the allottee(s). It would be expected that cultural activities would have been conducted by the allottee's family members or at least conducted with the knowledge of the allottee(s). The implication that only recent cultural use of the property would warrant avoidance by the proposed project is not consistent with applicable cultural resources laws and regulations. Cultural uses represented by physical (archaeological) remnants must be assessed for significance/importance to all interested parties and the general public based on criteria established by federal law (the National Historic Preservation Act). Conversely, the importance of a property solely for its traditional cultural uses (e.g., as a Traditional Cultural Property), whether conducted in recent memory or in the more distant past in some cases, can only be determined by the interested parties, such as Native Americans, who conducted those activities. Under federal guidelines, judgment of the importance of preserving a property where traditional uses occurred is not open to assessment by parties not associated with the traditional activities.

Regarding the question of whether any Native American traditional cultural practices have ever been documented for the tribal allotment, field-based studies were not conducted prior to release of the DEIS. Consequently, discoveries of archaeological materials that would demonstrate some aboriginal cultural uses of the property had yet to be documented when the DEIS was written. In addition, Traditional Cultural Property studies, which may indicate traditional cultural uses of the property that may or may not leave physical remains, also had not been completed. Documentation of evidence of aboriginal use of this and other properties along the Preferred Alternative has since been conducted and is summarized in the FEIS.

21-2
BPA has completed its negotiations with the allottees through the Bureau of Indian Affairs. BPA has successfully obtained rights across the tribal allotment for the new line and the existing line. If BPA decides to construct the Preferred Alternative, the new line would cross the tribal allotment land and would not follow the Segment A Reroute.

21-3
Please see Response 21-2.

21-4
Please see Response 17-5.

21-5
The EIS preparers are those people who have been directly involved in the writing of the EIS or planning of the project. They are BPA employees, consultants, and subconsultants. State and other federal agencies have been consulted in the development of the EIS and have contributed information to the analysis for the EIS, but they are not listed as preparers. BLM, U.S. Army, USFWS, and BOR are all cooperating agencies for this document and have participated in various meetings, submitted information, and actively reviewed the document prior to publishing. The Confederated Tribes of the Colville Reservation and the Yakama Nation were hired to complete the cultural resource work.

21-6
Please see Response 21-5.

Approximately 0.8 mile of the Segment A Reroute has soils that, if irrigated, would be designated as prime farmland.

Please see Response 17-14 for a discussion of impacts to wildlife. Additional discussion and analysis of impacts on wildlife along the Segment A Reroute have been added to Appendix B of the FEIS.

21-7
Comment noted. Please see Response 21-2.

22-1
We have noted the corrections to your previous submittal.

23-1
BPA has always considered double-circuit only in the agricultural areas. Also please see Response 10-3. BPA agrees that this is the most rugged portion of the entire route. The existing access roads in this area, and in other parts of the project, are being upgraded to accommodate construction traffic. The roads would be bladed and rocked. BPA would extend the existing roads to the new tower sites. BPA has located the new line such that tower site locations can be more flexible to minimize impacts by new tower sites and the new access road extensions.

23-2
On-the-ground surveys were completed before issuing a FEIS. All reports have been made available to the BLM. Cultural resources, rare plants, and sensitive wildlife species information has been updated in the FEIS.

23-3
The Confederated Tribes of the Colville Reservation (CCT) and the Yakama Nation have both expressed interest in this project. The CCT completed Phase 1 (literature review) of the cultural resource work for BPA. This was included in the DEIS as Appendix H. The Yakama Nation and its consultants are completing Phase 2 (cultural resource survey). In an effort to protect known cultural resources, the complete Phase 1 and Phase 2 studies are not included as an appendix to the FEIS; however, results of the surveys are summarized in Chapters 3 and 4 of the FEIS. BPA has also requested that the CCT submit a Traditional Cultural Properties study to BPA. BPA has initiated formal consultation under the NHPA with both Tribes. The CCT and BPA had their first consultation meeting on July 2, 2002. BPA will send all final survey reports to the BLM.

23-4
All occurrences of the term "BLM sensitive species" in the EIS and Appendices have been changed to "BLM special status species."

23-5
It was BPA's understanding that the parcels within the YTC that were previously held by the BLM had been or were being released to the YTC. Because the parcels are located within the boundaries of the YTC, they are being managed as part of the YTC. BPA proposes to keep the discussion of land ownership as was stated in the DEIS.

23-6
Section 5.5.1.1 will be corrected to accurately state that the BLM Spokane District is divided into ten management areas. Table 5.5-1 will also be corrected to state that Segment B crosses "Saddle Mountains," Segment C crosses "Scattered Tracts," and Segment D crosses "Saddle Mountains and Scattered Tracts."

23-7
The scale of the maps in the FEIS will not change. Because the project area and total amount of proposed transmission line is so large, the maps need to be at the present scale to keep the number of maps in the FEIS manageable. BPA realizes that the scale, unfortunately, does not allow for detailed study, only illustration.

Specialized maps and photos are being prepared for construction to show tower and road locations, in greater detail, as well as sensitive areas to avoid. Unfortunately, due to security reasons, BPA is unable to publish these maps as part of the FEIS or appendices.

23-8
BPA met with the BLM on May 20, 2002. BPA was able to discuss, in more detail, the proposed tower and access road locations that may affect BLM-managed land. Realty requirements were discussed. Right-of-way application and plan of development requirements were also discussed.

BPA fish and wildlife and botany contractors met with a BLM staff (wildlife biologist) on June 12,2002 on Saddle Mountain to review the tower and access road locations and discuss potential impacts. The BLM biologist stated that the project would likely cause relatively low impacts to habitat, wildlife and plants along the proposed route through BLM lands.

A conference call meeting was held on November 7, 2002, to further discuss new design developments. A field trip was conducted on November 21, 2002, to view tower locations, access roads, and sensitive sites. BPA will continue to be available to meet and discuss project design and impacts on the ground or in the office with BLM staff.

24-1
BPA has located your previous letter. The engineering design staff will contact you if necessary.

25-1
BPA has noted the corrections to your previous submittal.

26-1
The maps in the FEIS have been corrected. On the 11x17 maps, the "Hanford Site" refers to the Hanford Reach National Monument and the DOE lands as a whole. Map 8 delineates the boundaries of the Hanford Reach National Monument and the DOE portion of the Hanford Site. It also shows the areas managed by the USFWS. More information on cultural resources and consultation with Tribes has been incorporated into the FEIS, including the Summary.

26-2
Please see Responses 10-3, the last paragraph of 10-4, 10-5, and 18-5.

26-3
A discussion of the significance of impacts to wildlife species can be found in Section 4.4.1 Impact Levels. This section describes five categories of impact levels developed to describe potential impacts the project might have on individual species. A more detailed analysis of how construction might impact various species has been included in Section 4.4.2. Because construction and operation of a project in a particular habitat generally affects a number of species dependent on that habitat, impacts to wildlife species have been addressed by groups according to their preferred habitat.

26-4
A Biological Assessment (BA) was prepared to evaluate the potential effects of the project on listed and proposed listed species and critical habitat. USFWS has concurred with the effect determinations in that document. There were no effects to listed fish species, therefore, NMFS did not renew the BA.

26-5
Additional cultural resource surveys were conducted along the Preferred Alternative, with the exception of four small areas where access was denied to archaeologists by the private landowners. All areas that have denied BPA access would be surveyed after BPA purchases the easements for the new line. More information on cultural resources and consultation with Tribes was incorporated into the FEIS, including the Summary. Cultural resources that are considered to be significant or potentially significant and eligible for listing on the NRHP are identified in the survey reports. Specific details about individual cultural resources are not described in order to protect the location and quality of each resource. Avoidance and mitigation measures are also included.

The proposed Black Rock Reservoir is not in the vicinity of this project.

26-6
As part of the Preferred Alternative, fiber optic cable would be strung on the new transmission line between the Vantage and Wautoma Substations as well as on existing transmission lines between Midway and Wautoma Substations and Vantage and Columbia Substations. More detailed information on the fiber construction has been added to Chapter 2 and Appendix C, Construction Procedures. Impacts resulting from the fiber installation have been more clearly called out in Chapter 4 of the FEIS.

26-7
The USFWS has not designated critical habitat for bull trout. All references to critical habitat for bull trout have been removed.

26-8
BPA follows national standards and BPA standards to ensure the safety of the facility and people who work on the facility, live near the line, or use the ROW. The new line's conductors cannot be as low as the existing lower voltage lines such as the 230-kV line. BPA, in some cases, will use a flat configuration tower where all the conductors are on the same level except for the overhead groundwire. The actual tower height is dependent on the voltage of the facility, the land use within the ROW, and the distance between towers. For example, if lower towers are used, then the distance between towers must be shortened. And, if there is shorter distance between each tower then more towers are needed along the route. BPA tries to balance the distance between the lines, the height of the towers, the costs of the facility as the distance between towers is reduced or

increased from optimum (1,150 feet), and the land use (agriculture, residential, recreation area, natural environment issues, cultural issues, etc.).

26-9
Please see Response 19-1.

The need for action is insufficient transmission capacity north of Hanford to accommodate additional power transfers during the spring and summer months. If additional transmission capacity is not made available then system reliability could be compromised in the event of an outage.

The transmission system is operated in a reliable manner to meet expected outages. In order to facilitate additional power transfers required by market demands, more transmission capacity needs to be added to the transmission system.

Construction of the Preferred Alternative does not require the construction of another 500-kV facility along a different route in the event of an outage.

26-10
The only criteria BPA will use are whether or not BPA, through the Bureau of Indian Affairs (BIA), is successful in its negotiations with the tribal allottee(s). Please see Response 21-2.

26-11
Please see Responses 7-2 and 10-3.

26-12
The introduction or spread of weeds has been changed to a high impact level.

26-13
Alternative 2, the Preferred Alternative, is listed first in tables for ease of referencing impacts of the Preferred Alternative. The other alternatives are not listed in any order of preference. The mention of Segment G was an oversight in editing. B_{SOUTH} was originally referred to as Segment G by the project team.

26-14
The numbers in the FEIS have been updated and where appropriate the use of acres has been incorporated.

26-15
The Washington Natural Heritage Program (WNHP) determines if communities meet the definition of High Quality Plant Communities. The two plant communities identified by the WNHP as occurring within the study area include the Wyoming big sagebrush/bluebunch wheatgrass shrubland community and the bitterbrush/Indian ricegrass shrubland community. This sagebrush/wheatgrass community represents an area of shrub-steppe that has been relatively undisturbed. Approximately 50% of the historical shrub-steppe area in Washington has been converted to agricultural uses and only about 25% of the remaining shrub-steppe is in reasonably good condition; therefore, this area represents a relatively rare resource.

The WNHP was contacted to determine if it is possible to answer this comment, and they responded that the state has not been completely inventoried for High Quality Plant Communities. It would take a huge effort in terms of personnel and funding to conduct a complete inventory given the geographic extent of the Columbia Basin and it would also be difficult to obtain permission to enter all areas. WNHP staff stated that they know of other examples of these communities not included in their inventory. Therefore, BPA cannot determine the proportion of the total acreage of these communities that will be impacted or the relative quality of these occurrences to other occurrences. Only the amount of the High Quality Plant Community that will be impacted by this project can be calculated. This information was included in the FEIS. As requested by the USFWS, a Spring 2003 survey will be conducted on the monument.

26-16
The first round of rare plant surveys were conducted in the late summer of 2001, which was too late to identify some rare plants. Surveys in April, May, and August of 2002 were conducted based on the phenology of expected rare and listed plants. Results and analysis of the survey data have been added to the FEIS and Appendix F, Rare Plant Survey for the Preferred Alternative.

26-17
This section and its reference to Johnson and O'Neill has been revised to reflect the fact that more than the 150 species listed in Johnson and O'Neill use or occupy shrub-steppe habitat during some aspect of their life cycle.

26-18
All references in the FEIS to "Canadian geese" have been revised to read "Canada geese."

26-19
The reference to the elk herd "dramatically increasing" has been removed. Also, the reference to elk populations in surrounding areas coming from the Rattlesnake herd has been removed.

26-20
The Brunkal quote has been changed to state that potential habitat for pygmy rabbits and sagebrush voles is known to exist in Hanford Reach National Monument, but extensive surveys have not been completed for these species.

26-21
A discussion of the pygmy rabbit has been included in Section 3.5.7, *Threatened and Endangered Species*.

26-22
The extra listing of sagebrush vole in Table 3.5-1 has been removed and the correct information is presented in the listing.

26-23
Table 3.7-2 "*Private and Publicly Administered Lands in the Project Area*" was created to show land ownership, not who administers the land. The title of the table has been changed to "*Private and Publicly Owned Lands in the Project Area*."

26-24
The Land Use and Recreation sections in the FEIS were modified to include these accurate public agency administered lands as well as the National Wild and Scenic River classification and interim protection of the Columbia River.

26-25
The description of the Hanford Reach National Monument in this section was corrected in the FEIS.

26-26
The word "uninhabited" was deleted from this section in the FEIS.

26-27
The reference to the Wahluke Unit in this section was corrected in the FEIS.

26-28
BPA agrees that the Highway 24 travel corridor and Vernita Bridge and primitive boat launch are important visual locations for the local area. A "Visually Sensitive Viewpoint" has been added to the FEIS for the boat launch area. As discussed in the FEIS, the presence of seven existing transmission lines crossing the Columbia River 2 to 3 miles from this viewpoint contribute to a low to moderate impact resulting from the addition of a new transmission line. Additional visual impacts and mitigation measures are discussed in Chapter 4 of the FEIS.

26-29
The descriptions of recreation activities that occur on the Saddle Mountain Unit and the Wahluke Unit have been updated in the FEIS.

26-30
Table 4.1-1 has been updated to include the number of acres that would be disturbed by the line tensioning/stringing sites, staging areas, and construction of the Wautoma substation.

26-31
BPA agrees that fragmentation of vegetation communities reduces biodiversity. The effects of fragmentation have been discussed in the FEIS, mainly in terms of the effect to wildlife, although the potential effects to plants, such as impeding dispersal across the landscape and other aspects of plant life history, also have been discussed.

26-32
The following moderate impact level has been added to address this situation: In areas where native species are a minor component, removing the natives from the plant community is a moderate impact.

26-33
The impact level of increasing the density of noxious weeds in a location where they already exist has been increased to a moderate impact from a low impact.

26-34
A botanist has visited the area to verify the impacts that the proposed line would have on this community. No access roads or structures would be placed in this vegetation community, therefore

the project would have no effect on the Wyoming big sagebrush/bluebunch wheatgrass plant community.

26-35
A survey for Ute ladies'-tresses was conducted in September 2001 and August 2002 when the species can be identified by floral characteristics. BPA contracted with an independent botanist, who currently performs monitoring of a Ute ladies'-tresses population in Washington State and who also discovered a population of this species. The botanist searched for potential habitat and conducted the survey in potential habitat, including stream crossings. The botanist did not locate any Ute ladies'-tresses. Most road crossing areas are not potential habitat for this species because it requires high groundwater levels in the summer and most road crossings are over narrow streams that are often quite dry and have a narrow riparian area and narrow stream channel.

26-36
Please see Response 26-15 for a discussion of WNHP high quality plant communities.

A survey was done of the Umtanum buckwheat population in September 2001 and in spring and summer of 2002 by a botanist who was involved in the discovery of this occurrence and who continues to participate in the monitoring of this species. An existing transmission line is located between the proposed route and the Umtanum buckwheat population. Double-circuiting the line in this area is not considered necessary to protect the Umtanum buckwheat from impacts from the construction and presence of the proposed transmission line because an adequate buffer would be in place.

Existing access roads will be used that will not affect the Umtanum buckwheat population. One access road is particularly close to a population. BPA has agreed to install fencing along the road to keep vehicular traffic and parking from disturbing this population. Also, BPA has agreed to install a gate on the road entering the area to minimize general public use of the area.

Please see Responses 10-3 and 18-5 regarding double-circuiting.

26-37
Please see Response 26-35.

26-38
BPA is coordinating with the USFWS (Hanford Reach National Monument/Saddle Mountain Unit) staff to determine when, where, and how mitigation for impacts to native plant communities and shrub-steppe communities can be accomplished. Please see Response 10-5.

26-39
Please see Response 10-4 regarding reseeding activities.

26-40
Please see Responses 10-3 and 18-5. Also, BPA has surveyed for rare plants and found none near or within the proposed ROW.

26-41
The BPA is committed to working with the USFWS on all aspects of the project that concern the Hanford Reach National Monument/Saddle Mountain Unit as well as other lands that are managed by the USFWS. Design data for access roads and tower locations and survey results for sensitive plants and animals and cultural resources are being shared and discussed with the USFWS. Also, please see Response 26-38.

26-42
A discussion of potential electrocution of perching and migratory birds and prevention measures has been included in Chapter 4 of the FEIS. These risks have been significantly minimized by design changes over the past several decades. All BPA transmission line systems have been specifically designed to prevent electrocution of perching and migratory birds, including raptors. The size of 500-kV lines and the distances between conductors and between conductors and towers is much larger than the wingspan of the largest bird species. These tower and conductor system designs will also be used for this project.

26-43
BPA is not planning to conduct post-construction surveys for bird collisions with the new transmission line.

26-44
A discussion of the pygmy rabbit has been included in Section 4.4.8, *Threatened and Endangered Species*, of the FEIS.

26-45
All discussion in the FEIS of impacts on bald eagles has been changed from none to low, due to the potential for disturbance by temporary displacement from construction or maintenance activities.

26-46
The area between the Columbia River crossing at Midway and the proposed Wautoma Substation will have spiral bird markers installed on overhead groundwires on each span to prevent sage grouse and other birds from colliding with the transmission lines and overhead groundwires. Existing access roads will be used to the extent possible and new towers will be located adjacent to existing towers in most locations to match spans. BPA will use flat configuration structures (see Chapter 2 for an illustration) to lower structure height and keep all conductors on the same level through particularly sensitive areas. This will minimize the amount of shrub-steppe disturbance and minimize the vertical offset between the new transmission line and the existing lines.

26-47
Construction on much of the Hanford Reach National Monument/USFWS- and DOE-managed lands is planned for winter to avoid the risk of fire and to maximize revegetation success.

26-48
A number of studies of bat mortality and injury have been done in association with wind turbines and communications towers, however no studies of bat mortality and injury associated with transmission lines have been done (See Keeley in Avian Interactions With Utility and Communications Structures, Proceedings of a workshop held in Charleston, South Carolina, December 2-3, 1999. EPRI). There is some evidence that migrating bats echolocate less than foraging

bats, and may be more susceptible to collisions with tall structures especially communication towers and other very tall structures. However, migrating bats probably fly higher than the typical transmission line structures. It should be assumed that some bat mortality or injury would occur as a result of the proposed project, however since few bat mortalities have been observed near transmission lines compared to bird mortalities, it is unlikely that the proposed project would be a significant cause of bat mortality or have significant impacts to bat populations.

26-49
Please see Response 26-42 and 26-46.

26-50
USFWS and BPA are having ongoing discussions about appropriate mitigation measures for changes to shrub-steppe wildlife habitat resulting from the proposed project. Please see Response 10-5.

26-51
Section 4.5.2.2 of the FEIS has been updated to reference EMF information that is available in Appendix G.

26-52
Please see Response 26-7.

26-53
The designation for FP (Federal status Proposed) has been added to Table 4.5-3.

26-54
Table 4.6-1 in the DEIS and FEIS grouped land uses into five broad categories. "Preservation" as a specific land use is included in the forest, range, and agriculture categories.

Impacts from construction activities on lands within the Hanford Reach National Monument designated as "preservation" are not discussed in Section 4.6.2, *Impacts Common to Construction Alternatives*, because these impacts are not common to all alternatives or line segments. Instead, these impacts are discussed in the individual environmental consequences sections for Segments D, E, and F, which are the three segments that cross the lands designated as preservation (Sections 4.6.3.3, 4.6.4.2, and 4.6.6.1 in the DEIS). In addition, each of these sections indicates that impacts from Segments D, E, and F would include the loss and degradation of wildlife habitat, increased habitat fragmentation, and increased human disturbance to wildlife.

26-55
Please see Responses 10-3, last paragraph of 10-4, 10-5, and 18-5.

26-56
For Segments E and F, the impact to lands designated as "preservation" within the Hanford Reach National Monument was rated high in the DEIS.

For Segment D, the impact to lands designated as "preservation" within the Hanford Reach National Monument was originally rated moderate in the DEIS. The impact rating has been adjusted to high in the FEIS. However, due to the limited distance that the Preferred Alternative (the Segment D portion) is located within this "preservation" area in relation to the entire Preferred Alternative

(Segments A, B_{SOUTH}, and D), the overall land use impacts from this alternative remain moderate to high.

26-57
Most disruptions to recreational trail users would be expected to occur along the 22-mile stretch of the John Wayne Trail owned and managed by the YTC. Current YTC policy states that sections of the trail may be temporarily closed for safety purposes as directed by the installation Commander. Visitors wishing to use the John Wayne Trail on the YTC must sign in and out in-person daily at the Operations Center and may enter the YTC at one of two authorized entry points. Organized activities, tours, and events must be approved in advance of arrival at the trailhead by contacting the YTC Environment and Natural Resources Division. Trail users would be informed of any temporary construction-related closures if they call the YTC in advance of arrival or when checking in with the Operations Center and the entry points. Directions to the nearest open portions of the trail would be provided.

Information concerning temporary closures to the trail will be passed along to the local visitor association in the County of the closure. Any users calling the association would be able to get trail closure information. In addition, directions around the closed areas and back to the John Wayne Trail would be provided on signs indicating trail closures.

26-58
Please see Response 26-5.

26-59
Please see Response 26-5.

26-60
BPA did not intend to imply in the DEIS that the cumulative impacts would be significant. The FEIS discussion of cumulative impacts on cultural resources has been changed to correctly reflect what would occur.

26-61
Please see Response 10-4.

26-62
Please see Response 26-45.

26-63
Appendix D, Line Separation Issue Paper, has been revised to include a discussion on risk elements and a justification for line separation distances.

26-64
Please see Response 10-3.

26-65
The map was left out of Appendix H in the DEIS by mistake. In an effort to protect known cultural resources, the complete Phase 1 and Phase 2 studies are not included as an appendix to the FEIS;

however, results of the surveys are summarized in Chapters 3 and 4 of the FEIS. Please see Response 26-5 regarding additional detail on cultural resources added to the FEIS.

26-66
The FEIS includes all direct, indirect, and cumulative impacts to fish and wildlife and their habitats, cultural resources, and Hanford Reach National Monument/Saddle Mountain Unit lands resulting from construction, operation, and maintenance of the proposed project.

27-1
Under its responsibilities to Section 106 of the NHPA, BPA determined that the proposed action for the Schultz-Hanford Area Transmission Line Project was a federal undertaking that had the potential to cause effects on historic properties. In a letter to Ms. Adeline Fredin dated April 8, 2002, BPA, pursuant to 36 CFR 800.4(a)(4), initiated formal consultation with the Confederated Tribes of the Colville Reservation (CCT). BPA and the CCT had their first consultation meeting on July 2, 2002.

27-2
The Cultural Resources sections in the FEIS have been revised to reflect changes discussed with the CCT and USFWS. Additional information from the surveys conducted along the Preferred Alternative has also has been summarized in the FEIS. Map 11 has been removed from the FEIS.

27-3
The definition of "lithic" has been corrected, the extra "the" removed, and the table of contents has been modified.

27-4
We apologize for the oversight of omitting the project map in the Appendix H technical report. Please see Response 26-65.

28-1
BPA, as a federal agency, has the discretion and expertise to define the purpose and need for the action that it is proposing to take. BPA has defined the need for action for this project in Section 1.1 in the DEIS and FEIS. BPA has added a section in the FEIS under Section 2.7, *Alternatives Eliminated from Detailed Consideration*, that describes BPA's study of non-transmission line alternatives, including those identified in this comment letter. Please see Response 19-2.

28-2
At the time the DEIS was developed and distributed to the public, BPA included all information then available regarding project design, affected environment, subsequent impacts, and recommended mitigation. Because BPA has incorporated avoidance of environmental impacts into its design criteria (i.e., the engineering and environmental information are shaped through an iterative matrix approach to formulate the least damaging, practical project design), much of the final design information occurs after obtaining information from public input received from the publication of the DEIS. The prior method of project design involved a phased approach, where the first phase concentrated on transmission line requirements, and did not address environmental criteria (avoidance, minimization, and compensation) until transmission criteria were firmly established. Unfortunately, under our current approach, complete transmission design information is not available until a later stage in the NEPA process. However, BPA believes this matrix approach is consistent with the mandate of Section 102(2)(A) to "utilize a systematic, interdisciplinary approach which will insure the integrated

use of the natural and social sciences and the environmental design arts in planning and in decision-making which may have an impact on man's environment."

As more design information becomes available, analysis of impacts continues. Meetings occur with agencies and tribes to discuss more detailed design information, expected impacts, and mitigation. On federal lands especially, other agencies define for BPA their expected requirements for mitigation.

The FEIS has been updated with new information. The ROD will outline BPA's decision and commitment to mitigation. If BPA decides to construct one of the alternatives, BPA will then prepare a Mitigation Action Plan as required by the USDOE Guidelines Implementing NEPA. The Mitigation Action Plan will include further mitigation detail.

BPA does not conduct on-the-ground intensive surveys for cultural resources (including TCP sites), sensitive, or threatened and endangered plants and animals for all alternatives, nor does NEPA require such intensive surveys. NEPA only requires a "reasonable" discussion of impacts and mitigation. Please see Response 14-4.

28-3
The mitigation sections of the FEIS have been updated with new information where available. Please see Response 28-2.

28-4
The affected environment, impact, and mitigation sections of the FEIS have been updated with new information.

28-5
BPA has tried to provide greater clarity on our mitigation plans. As stated above, BPA will complete a Mitigation Action Plan if BPA decides to construct one of the alternatives. NEPA does not require a complete disclosure of precise mitigation commitments, but only a reasonable discussion of how mitigation will be accomplished. Please see Responses 28-2, 28-3, and 28-4.

28-6
Please see Responses 28-2, 28-3, 28-4, and 28-5.

28-7
As explained in Chapters 3 and 4 of the DEIS and FEIS, all existing substations for this project have Spill Prevention Control and Countermeasure Plans in place. These plans outline protocols and procedures for response in case an oil spill or leak occurs at these substations. The plans do not provide details on the effects of an oil spill occurring at these substations.

A Spill Prevention Control and Countermeasure Plan would be developed for the new substation and the plan for Schultz Substation would be modified to include and address the new equipment to be added at the substation. Commitments to prepare and update these plans were stated in the FEIS. The protocols and procedures used to respond to a spill or leak function as the best mitigation in case an oil spill or leak occurs.

28-8
The Mitigation Action Plan would provide details on the mitigation measures that BPA would commit to doing. Some mitigation does not require monitoring. Other mitigation may require monitoring. Federal agencies that manage lands proposed to be crossed by the project may require monitoring of certain mitigation measures. BPA's preference is to provide funds to the federal agencies that manage these lands for monitoring because they have the most knowledge of the land and resources present. The details on monitoring are still being determined.

28-9
The Segment A Reroute was developed in response to anticipated delays or possible inabilities to acquire new ROW easement and renewing existing easement across tribal allotment land. This has been clarified in Chapter 2 and Appendix B was added to the FEIS to describe Segment A Reroute in greater detail.

28-10
Appendix B of the FEIS has been written to clearly state more detailed information on the affected environment and potential impacts of the Segment A Reroute.

28-11
The rationale for developing the B_{SOUTH} segment has been added to Chapter 2 of the FEIS.

B_{SOUTH} was developed in response to a request by the Army, whose land is crossed by both of the B_{NORTH} and B_{SOUTH} segments. The Army has concerns with the 1,200-foot separation between the existing line and the new B_{NORTH} line. The impacts associated with B_{NORTH} line separation would adversely affect Army maneuvers and would increase the potential for aircraft collisions with the lines. The Army suggested paralleling existing lines located farther to the south (B_{SOUTH}) in order to minimize the line separation distance.

29-1
The proposed project is a federal project owned, operated, and maintained by the BPA. Therefore, obtaining county-level approvals would not be required. BPA would work towards meeting or exceeding the substantive standards and policies of the county zoning and critical area ordinances and comprehensive plans.

30-1
BPA will consider whether or not the line could be moved. Currently it is adjacent to an existing line. To move the line further to the east and away from the house and its view could be difficult due to the steep terrain. The line's proximity to other homes to the east also would need to be balanced in this consideration.

31-1
Comment noted.

31-2
BPA agrees that the Preferred Alternative is a good balance between cost and impacts.

31-3
Comment noted.

32-1
Comment noted.

33-1
Your phone number and request to be notified before entry has been added to the Permission to Enter Property form that you signed.

34-1
BPA has contracted with the Yakama Nation to complete a cultural resource survey of the Preferred Alternative. The goal is to minimize adverse impacts to Native American sites along the route.

35-1
Impacts of the different alternatives are analyzed in the EIS.

35-2
Comment noted.

35-3
BPA will negotiate easements with the landowners along the Preferred Alternative.

36-1
Comment noted.

EL-1
BPA will consider weather conditions during the construction phase to minimize erosion and rutting potential. BPA will also upgrade existing access roads so that if the weather were to bring considerable moisture, travel can still take place without substantially increasing erosion. Some construction also could take place in the winter when the ground is frozen.

EL-2
No in-water work would be performed in Naneum Creek. Existing crossings would be utilized for access.

EL-3
BPA will take this into consideration. If this is an existing access road, BPA will continue to use it for the existing line and the new line. BPA needs access to every structure for construction, maintenance, and emergency purposes. BPA will design creek crossings so as to minimize impacts to the water and surrounding vegetation.

EL-4
The new proposed line would have no effect on Bowers field. BPA will be coordinating with the FAA to determine if any portion of the facility needs to be marked so as to be better seen from flying aircraft.

EL-5
Because rattlesnakes are not protected or listed under state or federal regulations, they were not surveyed. However, large numbers of snakes have been observed in the rocky areas between Wilson and Naneum Creek and east of Naneum creek by survey crews and other field personnel on the

project. Existing access roads will be used where possible to minimize impacts to rattlesnake den sites.

EL-6
Comment noted.

EL-7
If there is an existing ongoing noxious weed program by the county to eradicate weeds, BPA participates. If there is no noxious weed program by the county, it is ineffective to eradicate weeds on BPA ROW only to have the ROW reinfested with weeds in a short time period. BPA works closely with counties and participates in their weed programs. BPA also works with landowners on weed issues. Your concerns have been passed on to our maintenance personnel.

EL-8
Unfortunately, this comment is not specific enough for BPA to reply.

EL-9
BPA would acquire approximately 47 acres for the Wautoma Substation. The substation footprint would be approximately 500 feet by 800 feet.

EL-10
BPA agrees.

EL-11
Comment noted.

EL-12
Comment noted.

EL-13
It appears that this comment is by the same person who wrote 30-1, but the BPA representative who recorded this switched the directions the landowner wanted the line moved. Please see comment 30-1 for the response.

EL-14
Please see Response 26-10.

EL-15
Comment noted.

EL-16
At some point in the future additional transmission capacity may be required to support load growth in the Puget Sound area. However, the timing for this addition depends on load growth and where new generation is developed.

EL-17
Please see Response 10-3.

EL-18
The Schultz Substation was constructed to address the Puget Sound voltage stability problems identified in the late 1980s. At that time, when the largest lines (Coulee-Raver lines) feeding the Puget Sound went out, they would cause voltage stability problems. Schultz Substation was built to add a cutoff for the Coulee-Raver lines. The multiple lines that are tied into Schultz Substation limit the severity of outages on the Coulee-Raver lines and provide backup routes for the electricity.

EL-19
Preliminary studies indicate that this project will increase the transfer capability north of Hanford by approximately 600 MW and reduce or eliminate remedial action schemes (RAS) for single-line outages.

EL-20
The line is proposed to be located on the northeast side of the existing 500-kV line in the Cooke Canyon vicinity.

EL-21
Please see Response 7-3.

EL-22
Thank you for reporting this encounter with appraisers. BPA has advised their appraisers that respect must be shown to all landowners in conducting interviews and appraisals.

EL-23
BPA can only acquire land rights needed for the particular project. The impact of introducing a new ROW for transmission towers and lines can vary dramatically depending on the placement of the ROW in relation to the property's size, shape, and location of existing improvements. A transmission line may diminish the utility of a portion of property if the line effectively severs this area from the remaining property (severance damage, as defined in the "Uniform Appraisal Standards for Federal Land Acquisitions"). The landowner would be compensated for the value of the transmission line ROW easement as well as the severance damage, if any. If no utility is left to the remainder of the property, then BPA would offer to acquire the entire parcel.

EL-24
BPA personnel and its contractors contact landowners prior to entering private property if the landowner designated this request on their Permission to Enter Property form.

EL-25
BPA has contacted all the counties crossed by this project and will meet with any county officials who express an interest.

EL-26
Comment noted.

EL-27
Please see Responses 21-1, 21-2, and 26-10.

EL-28
In past instances, some transmission lines have been reconductored for loss savings and/or to reduce noise levels. However, in most cases, transmission lines are typically considered for reconductoring once the operating temperature of the existing conductor has been upgraded to its maximum capability. This is accomplished by resagging the line, removing insulators or soil beneath the limiting line sections.

EL-29
Please see Response 10-3.

EL-30
BPA will minimize the construction of new roads. BPA wants to work with individual landowners to install gates and maintain gates. BPA also does not want the public on BPA ROW.

EL-31
Unfortunately that sometimes happens. BPA does tell its personnel and the contractors to keep the gates shut unless previously arranged with the landowner while construction takes place.

EL-32
Human population densities within the study area were identified in the DEIS and FEIS as sparsely populated. This is due to all of the segments crossing through rural areas where no population centers are located (refer to Section 3.8.1). It is not expected that population densities would increase as a result of the project; however, population growth and associated densities may decrease if transmission capacity is not increased.

EL-33
Please see Response 10-3.

EL-34
The difference in tower types is that one tower type can carry more conductor weight than another and also carry higher voltage wires, overhead groundwire, and communication wires. Some towers, dead end towers, are much heavier so they can support changes in conductor tension and support angles as the line changes direction.

EL-35
Unfortunately, due to security reasons, BPA cannot include a map in the FEIS that shows tower locations. A BPA representative would be available to meet with you on your property if you have any questions as to where a tower may be located.

EL-36
Please see Response 7-3.

DA-1
BPA will try to schedule activities to avoid or minimize crop damage.

DA-2
Please see Response 7-1.

DA-3
BPA agrees that paralleling next to an existing line would reduce overall impacts as compared to a non-parallel line. The Preferred Alternative, as compared to the other alternatives, has the most segments where the new line is immediately parallel to an existing line. Towers are immediately adjacent to the existing towers at Crab Creek. Tower locations are determined after surveys (wildlife, plant, and cultural) have been completed and design has been determined. New tower sites and new access roads have been located to avoid sensitive plant areas to the extent practicable. The Preferred Alternative includes one area where existing towers would be replaced with new double-circuit towers. New towers would be placed next to or near existing roads where feasible. BPA does not want to build new roads if not necessary, so BPA balances the location of new towers and their costs and impact to the costs of adding new roads and their impacts to find an overall best solution that minimizes costs and minimizes impacts to land uses and the natural environment.

DA-4
Thank you.

DA-5
Please see Response DA-3.

DA-6
Please see Response DA-3.

DA-7
Please see Response DA-3.

DA-8
Please see Response DA-3.

DA-9
Please see Response DA-3.

DA-10
Please see Response DA-3.

DA-11
Please see Response DA-3.

DA-12
Please see Response DA-3.

DA-13
All transmission lines have insulators connecting the conductor to the towers. At road crossings, BPA uses double insulators to increase reliability and decrease the risk that any of the conductors would release from a tower. At road crossings, BPA also increases the distance from the ground to the lowest conductor.

DA-14
Federal facilities, including BPA facilities, are exempt from local taxes, including property tax. There may be some lost income for some local areas due to small decreases in property value. BPA only purchases rights across private properties. The property still remains in private hands and is therefore still taxed. For those situations where BPA purchases the property, as for the Wautoma Substation site, property tax revenue would be lost to the local county. Through the construction of these new facilities, more businesses are able to locate in Washington and other areas. As a result, the overall impact to local counties could be positive with increased property values and various tax revenues in other areas as a result of new businesses and new residences.

DA-15
Wind farms cannot be directly connected to this new 500-kV facility. A 75-MW generation facility would likely need to be connected to lower voltage lines which in turn, would be connected to the larger lines, such as the proposed Schultz-Hanford line. If someone wants to connect a new generation facility to the BPA system, they would need to contact BPA directly and pay for a study to be done to identify the system upgrades that may need to be done. If you have any questions concerning connecting a generation facility, please contact Mike Raschio at 503-230-3000.

DA-16
BPA has looked at the location immediately west of the Columbia River associated with the railroad route. There is no existing transmission line facility there now so this would be a brand new location with no benefit of existing roads or towers. BPA prefers to locate new facilities adjacent to existing transmission line facilities to minimize impacts. There would be numerous environmental impacts in the location immediately west of the Columbia River such as crossing streams right at their mouth into the Columbia River, visual impacts to those people who overlook the river from the east side, sensitive plants, cultural sites, etc. There are an infinite number of possible alternative locations. The location suggested is not substantially better than the location of the alternative that already crosses the YTC that also has numerous environmental and land use impacts. BPA will not consider the location immediately west of the Columbia River any further.

DA-17
Please see Response DA-16.

DA-18
The Preferred Alternative includes crossing lands that support orchards and vineyards. To reduce the impacts on these crops, BPA proposed to replace the existing line with a double-circuit line between Vantage and Midway Substations. BPA will also work with local landowners to determine the best location for the new double-circuit towers and associated access roads. BPA will also try to construct the new line during the period when crops have already been harvested or the crops, such as orchard trees, are dormant.

DA-19
The new line will not be connected to either the Vantage Substation or the Midway Substation.

DA-20
BPA tries to design their public meetings to fit the communities affected by the project. In many cases, that means that BPA employees and contractors wear casual clothing instead of business attire.

The idea of BPA employees wearing BPA logo shirts for easy identification is good and will be sent to management.

DA-21
The Preferred Alternative is located so as to minimize impacts to land use and the natural environment, while keeping system reliability risks as low as practicable.

DA-22
Please see Response DA-21.

DA-23
Yes, a Mitigation Action Plan will be prepared for the entire project.

DA-24
BPA will coordinate with the FAA to determine which structures/conductors need to be marked, if any. BPA does design to FAA requirements.

DA-25
Comment noted.

DA-26
The on-the-ground cultural resource survey began in April 2002. Results are summarized in the FEIS.

DA-27
The Cultural Resources Program of the Yakama Nation and their contractor were responsible for the cultural resource ground survey.

RI-1
Each project has its own energization date. McNary-John Day, Starbuck Power Project and Wallula-McNary are all on hold until financing is secured. Kangley-Echo Lake has an energization of winter 2003/2004. Grand Coulee-Bell and Schultz-Hanford Area both have energization dates in late 2004. The Schultz Series Capacitors is to be energized in fall 2003 and Celilo Modernization in fall 2004. The Monroe-Echo Lake project has no defined energization date at this time.

RI-2
BPA will minimize the construction area through shrub-steppe habitat and keep the footprint of the transmission line and roads to a minimum.

RI-3
Please see Response 10-6.

RI-4
Comment noted.

RI-5
BPA prefers to locate new facilities adjacent to existing facilities to minimize overall impacts to land use and the natural environment. The Preferred Alternative contains the shortest route across the Monument. Please note that Alternative 3, the only alternative that does not cross the Hanford

Reach National Monument, has greater environmental impacts than the alternatives that cross the Monument.

RI-6
Please see Responses 10-3 and 18-5.

RI-7
The maps have been revised to correctly label the Hanford Site.

RI-8
BPA apologizes for any confusion the maps have caused. The discrepancies that BPA knows of have been corrected.

RI-9
Map 8 in the DEIS showed the Preferred Alternative and the other alternatives overlaid onto the Hanford Site, including the Hanford Reach National Monument. Map 8 also shows this in the FEIS.

RI-10
The document does not have a specific section for the Hanford Monument; however, within the impact discussions for the Preferred Alternative and Alternatives 1 and 1A impacts on resources within the Hanford Reach National Monument are specified within Segments D, E, and F respectively.

RI-11
BPA has analyzed the impacts to vegetation, wildlife, and visual resources within the Hanford Reach National Monument and has developed mitigation to minimize impacts to those resources.

RI-12
BPA is working closely with USFWS concerning the crossing of the Hanford Reach National Monument and Crab Creek areas as well as impacts in general on other resources such as sensitive plants and wildlife species.

RI-13
Please see Response 10-6. Admittedly, the Summary would have been much clearer had the map not been inadvertently left out of the publication; however, BPA will not re-issue the draft Summary with a map. The DEIS included all of the maps and a reader could have requested the entire document if desired.

RI-14
Please see Response 10-5.

RI-15
The Summary has been revised for the FEIS.

RI-16
BPA determines the value of the property impacts before the construction of the new facility as compared to the value of the property after the construction of the new facility. BPA also uses very recent land sales to determine land values. If a landowner is no longer able to use a piece of land

due to BPA's new facility, BPA would consider purchase of the entire parcel, such as a small lot where the new line would take up most of the lot and the remainder is not large enough for a house or building.

RI-17
The Preferred Alternative has the least overall impacts to land use and the natural environment.

RI-18
Please see Response 18-2.

RI-19
BPA has contacted DOE. No impacts are expected to the Laser Interfermetric Gravitational Observatory operations.